

ABSTRACT OF THE DISCLOSURE

In a semiconductor module, adhesion between an insulating base material and an insulator provided on the insulating base material, for example a sealing resin of the semiconductor element, is to be improved.

A plurality of interconnect layers, each including an interlayer dielectric film 405 and a copper interconnect 407, is stacked and a solder resist layer 408 is formed on an uppermost layer. Elements 410a and 410b are formed on a surface of the solder resist layer 408. The elements 410a and 410b are molded in a molding resin 415. The surface of the solder resist layer 408 is modified by plasma processing under a specific condition so that minute projections are formed thereon. Such surface of the solder resist layer 408 is processed such that a value of y/x becomes not less than 0.4, where x represents a detected intensity at a binding energy of 284.5 eV and y represents a detected intensity at a binding energy of 286 eV, by an X-ray photoelectric spectroscopy spectrum.